Interactive Media Arts

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The Networked Mind
– "Reprogramming" the Human Being

1. I CLICK, SO I AM

Our goal is to demonstrate interactivity on the one hand as a phenomenon ascribed to the electronic environment, and on the other – as a source of human identity formation, within the meaning of individual attitudes to the environment. In the first sense interactivity is understood as a process of transformation and creation of an autonomous electronic sphere of the electronic *realis*, which is made available to man through various interfaces, in the second one – as a genetic capacity of man, being shaped in the process of participation in the reality of electronic *realis*.

Interactivity is associated with human exposure to the influence of technology, resulting in their qualitative transformation, i.e. the adaptation and dependence on technology. We refer to the phenomenon of man, who becomes a mediated being by *devices*, i.e. the phenomenon of seeking information through the interfaces and following the need to enter different relationships with technology, which results in greater and greater necessity to pay attention to the reality of the electronic environment.

Regardless of various possible ways of understanding interactivity[1] associated with art, the aspects of culture, communication, technological, sociological, or the ones understood as e.g. the mediated communication (R. Kluszczynski), communication with a machine (T. Binkley), as a biotechnological ability (K. Warwick), as a medium of communication (J. Lanier) or self-referential (A. Porczak) – we are trying to describe inter-

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[1] R. W. Kluszczyński, *Dylematy interaktywności (sztuka w kulturze partycypacji)*, [in:] E. Wilk, I. Kolasińska-Pasterczyk (ed.), *Nowa audiowizualność – nowy paradygmat kultury*?, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2008, pp. 149-164.

activity as a phenomenon related to electronics, in the sense specific to cyber-culture and in this sense as a process for the existence of man in the electronic environment.

We assume that interactivity is the property of the electronic environment and it only arises on the electronic ground. We renounce the concept of interactivity other than the importance of mediation in the device, owing to which when using the term "interactivity", we have in mind the "electronic interactivity". We renounce the understanding of the phenomenon of interactivity as taking place in the physical reality of the world.

We treat interactivity as a qualitative relation, i.e. characterized, for example, by an intention or teleology. Interactivity seems to extract the same quality from itself – this involves the unpredictability of emerging structures, and thus the emergence of certain values such as the ones from unexpected relationships, identifying the coexistence of man in the electronic *realis*. Interactivity opens man to new relationships and ways of communication. This is associated with the human search for environments that assure them the significant and valuable co-existence. So, what are the relationships formed through the mediation? – Bearing in mind especially the development of *equipment* and human integration with the digital environment, I have in mind here showing that the electronic environment offers us new opportunities, which we use alternatively or even we renounce the activity in the physical reality of the world.

We regard the interactivity as a source of emerging of the electronic identity, i.e. the identity created as a result of interactive existence of man in the reality of the realis electronic environment. This aspect we also connect with art, assuming that interactive electronic art, both in the form of installation art as well as net-art, firstly – changes the importance of the creator and the recipient, secondly – with regard to the possibility of creation it can cause identity processes. This is related with the interactive experience, where "seeing" and adopting a reserved attitude turns into involvement and "creation". We treat interactivity in art[2] as a source of similar influences, which are possible to describe in broad terms, in cyber-culture, but they are oriented towards the interactive work experience, which obliges the recipient above all to perceive

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[2] A. Cameron, S. Cillari, S. Kovats, T. Moriyama, J. Sauter, *Interactive Art: Maneuvering through the Strategies of Spectatorship*, [in:] H. Leopoldseder, Ch. Schöpf, G. Stocker, "CyberArts 2008; International Compendium – Prix Ars Electronica 2008", Hatje Cantz 2008, pp. 144-155.

the work of art as such, and not, e.g. as the experience affecting other spheres of life. Let us note that art has always had a similar impact on human life, e.g. in the form of catharsis or illusion, but in the case of interactive art developments the aesthetic experience may be more intense and it may oblige the recipient more than in the case of proscenic art.

We are trying to demonstrate that interactivity can be understood as a source of human activity resulting from the influences which do not need to have their own form in the physical world. We speak of man as operating in an open real electronic environment of *realis*, where the human being is subjected to unpredictable and not fully recognized influences. Interactive participation can alter the perspective of vision and the sense of meanings, by which it shapes the human being in a way that was not previously possible. The openness of electronic environment means that a person can begin to participate in a number of new situations for themselves, which may cause changes or lead to self-creation. The human identity in the era of interactive electronics is characterized by the awareness of existence and defining himself as a result of various influences in the electronic environment. The interactivity understood in this way is a process of opening the human being to the environment at a previously unprecedented scale.

Interactivity is treated as a basic process for the development of human relationships with the world in the era of cyber-culture – "I click, so I am" (or even "I do not click – I do not exist") – in fact, the operation in the reality of electronic *realis* would be treated as a factor of anthropological importance, where technology dictates terms. The man "is subjected to permanent upgrading", he adjusts his consciousness that changes unnoticeably with the needs of technology. The speed of change and the ability to assimilate them by human influence, in turn, the expansion of the scope of interactivity. The process of interactivity involves various human spheres, it gives rise to emotions and passions, it touches the sublime issues of human life, which often can be received by the participant of the electronic world *realis* as an unprecedented value or type of a new human experience. In this sense, the interactivity is a cognitive process, which becomes an alternative one in relation to the unmediated knowledge.

The object of our interest is called identity interactivity, being developed by man owing to his entering the Web. This concerns a single participant in terms of entangled mass effects, within which there are multi-faceted relationships. The identity interactivity is due to the lack of restrictive security, which the man has in the physical world, so, it leads him to a different, intentional or not, type of participation in the Web. This can be called a security factor assuring the axiology of the Network – the lack of security and in turn following its openness, incline rather to adopt the attitude of conservation and creation of values. The openness of the reality of the *realis* electronic environment makes the man to be subjected to unpredictable influences, whose variety leads to choices, creating relationships, the self-creation and the environment in the electronic reality ever closer to the man and his identification with the electronic personality. The identification interactivity contains a specific type of human activity, which is the feature of the man in the era of cyber-culture and which forms his humanity. We treat the interactivity as a way of human functioning through mediation.

Let us indicate the features of the identity interactivity, which affect the transfer of activities to the *realis* electronic environment:

1. GENERATING VALUES. We refer to the generative nature of interactivity in relation to values. By values we mean the same values that belong to the physical world, but we assume that they acquired their electronic form in the *realis* electronic reality. This is due to e.g. communication, teaching (e-learning), emotional involvement. A good example of this may be the importance of encyclopaedic knowledge, which appeared due to the occurrence of Wikipedia. You may ask, what is today's reference knowledge? How to define it? Is the encyclopaedia on the Web only one aspect of information, or obtaining knowledge from Wikipedia is the process driving the man to use an encyclopaedia on the Web in terms of the knowledge of the "first contact"? To what extent does Wikipedia form human knowledge? (Especially if it is supported in part by bots and it is created by their decisions?) Likewise, the encyclopaedia, or the "encyclopaedicity", are they only a number of books on the shelf, or perhaps the knowledge collected on the Web which is supplemented on a regular basis? What is the definition contained in the printed encyclopaedia, with a closed content, modified by a supplement next year? What is in this sense, the question of an expert and a "stamp" of credi-

bility? Perhaps the reference knowledge changes its meaning – i.e. it becomes Networked, nonlinear and hyper-textual one, constructed by many authors, and in part by bots. Never before the human being has had access to knowledge in such a manner and to this degree. Bearing in mind the source and the structure of knowledge which are encountered on the Web, we can conclude that there is a measurable, valuable being – valuable in terms of Web information, which affects our overall relationships to the concepts and the issues, and which becomes the basis for thinking about the world. The quality of the information obtained from the Internet may be disproportionate to the information obtained in the physical world and may lead to determination of the value of the information by the content such as Wikipedia. Man acquires information from the Web at different levels of significance, which may mean that some forms, such as the encyclopaedia in the physical world will change their significance or the meaning of existence. In this way interactivity can be treated as a source of knowledge.

2. CREATING ACCESS SPACE. The aim is to individually adapt to the access to the reality of electronic *realis*, the creation of mediation and, following it, forming the new ways of functioning or the habits functioning in the physicality. This is related to the need for surrounding oneself with the *equipment* and contents, coming from mediation in multimedia – man seeks knowledge about the world and in order to do this he produces around them his own *access space*. We describe it as the space formed in the physical world, that is the one related with the places where the man is mediated. The effect of human occupation of the access space could be described as a "docking awareness" which finds the stability of stimuli and the format a variety of (any) information. Man adapts its operation to an efficient, well-known and accepted system which, becoming his physical environment, is a source of understanding and the way of existing in the electronic space. The creation of *access space* in the space of the physical world can be regarded as the first stage of formation of influences that shape the majority of relationships, which the human being creates around them.

Building the *access space* is treated as one of the key phenomena in cyber-culture. It has mainly cultural or philosophical nature, and it involves the operation of various *devices* – notably the personal computer and the need of mediation associated with it. The *access space* is a place

where creating community relationships on the Web begins, so, it may to some extent eliminate the relationships in the physical space and confirm the expansion of interactivity. Since the *access space* is founded on technology, (the *devices* that condition it), the loss of access can be understood as a cut-off, and depriving the human a part of their world, being so important that it can cause a feeling of emptiness and inactivity, the lack or closure. In this sense, interactivity becomes a synonym for access.

3. ASSIMILATION OF THE FORMATTED CONTENT. We refer to the cognitive process, affecting cognitive tension associated with some emerging sense of alienation in relation to the equipment and the type of content existing in the electronic *realis*, for example, their immateriality; we do not deal with physical reality, but for example with the phenomenon of tele -presence or telematicity. We speak here about the human capacity to move among Web information, even not making valuation or using it. It is a process of assimilation of formatted content by electronic devices and the ability to transform them into cognitive structures – notions – especially those that have designates in the physical world, and they appear in the reality of electronic *realis* in the form of different matter – the electronic matter. The phenomenon of assimilation, one can try to describe from the historical point of view, which could show a reality changing around a human being in general meaning – in art, culture or the one emerging as a result of technological progress. However, it would not be anything new, and this process works in cyber-culture with the previously unprecedented intensity. The need for assimilation of technology by the human directs his mind on the electronic reality, causing changes in categories of thinking - the emergence of cognitive structures that are responsible for interactive access of the human to immaterial content in the reality of electronic *realis*. In this sense, interactivity may be treated as a source of cognition.

4. OPENNESS. I mean the "openness" as a cyber-culture category – the natural process to which man is subjected, the opening to diverse influences. This is the opposite process in relation to reducing and fossilization of meanings. This openness is also understood as a category of today's humanities or as an existence category or, in the sense of human attitude in relation to the environment. The nature of electronic reality includes the determining factor, i.e. the need for a man to open up to

the electronic environment – ... *transgressing the boundary between realities, entering the electronic* realis, *the man falls into the mechanisms that determine the modes of existence in the open environment, by which he rather assimilates and persuades than dominates and determines. Life in an open environment is a kind of Web transcendence, a permanent openness "to" something alongside with an ever deeper assimilation of what is encountered.*

Indeed, the openness of electronic *realis* could probably be described as an ontological category, that is, in our case, as the notion of onto-electronics. The importance of openness in the context of interactivity is a key category, which is relevant to the shaping of identity in the electronic reality. Openness could also gain a comparative overview with regard to the physical reality of the world - in fact, in the world of electronic *realis* it is difficult to think in terms of literal meanings about keeping the restrictions as they are possible in the physical space – it is a different experience and a different kind of reality (in the process of hybridization, some mechanisms are changing, others are disappearing, and others are completely emerging as previously completely unknown).

Openness may be accompanied by a sense of uncertainty and even danger, but on the other hand closeness can create such feelings even to a greater extent. Openness is treated as the essential characteristics of identity interactivity, which affects the change in human attitudes to the environment. In this sense, interactivity is the source of the expansion of "openness" of man.

2. INTERACTIVITY AS A SOURCE OF IDENTITY

Openness of the *realis* electronic environment is associated with the authenticity of the attitudes and the value of content. This includes for example the capacity of being exposed to the plurality of influences which change the way we view or make valuation. The closed attitude in the days of open-closed spaces, such as the Web, can lead to identity monadization in the physical world, isolation resulting from the rejection of the category of openness. So, it comes to transferring the emphasis on recognition of resources to build judgments about the reality, in which man lives, i.e. the recognition as the true ways of acting and the content coming from the *realis* electronic reality. The linear

access to information in the physical world can create limitations and sustain the models of behaviour, as reflected in the open contact with the open environment of the electronic reality. The structure of physicality, such as the distribution of information is associated with other divisions and distinctions than access to information on the Web. In the physical world it is the combination of known and acting according to fixed rules phenomena, where the flow of messages is fairly structured. Contact with an open environment is equal to the focus on interactive influence, which passes through man, creating situations and the quality of relationships, that may be impossible to find in the physical world. This encourages man to permanently self-modifying in the existence of the electronic *realis*.

One example in which we search the identity interactivity is the work of Johannes Gees, communimage[3] [1999] http://www.communimage.ch. This work is only in the electronic space and it creates the possibility for allowing the recipient, who becomes a co-creator, to express freely themselves in any limited technology. communimage refers to the virtual *collective "sculpture"* (inspired by such activities on the Web as "Sito" http://www.sito.org/help/00/00.html), where a co-creator may include their work together with other participants of the co-created work. The contributor declares e.g. his element, the type of sentimentality or intentions, then he forwards an e-mail to http://www.communimage.ch/cgi-bin/engl/communimage.pl?n44e32&0&3. When deciding to take part in communimage, the co-creator joins the Web community where values, attitudes, intentions may be different than in the relationships found in the physical world. This is due to the openness of the work, whose only limitation is the decision to be in it. communimage is a kind of electronic community, where the act of creation is associated by accepting the existence of an open environment which is open to this work. Joining of the co-creators is the choice without additional pre-conditions or initial assumptions – it is only the opening which could encourage to reflect on the responsibility and autonomy in decision-making in electronic reality. This is not related to speculation or predictability as the openness of the work allows only to a small extent the planning of the closed zone or setting boundaries. Taking a selected

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[3] R. Green, *Internet Art*, Thames & Hudson, London 2004, s. 165-168. In February 2009 *communimage* was being created by more than 2 thousand recipients from 91 countries. The print surface of *communimage*, as the documentation of the Web work on paper amounted to more than 150 square meteres (http://www.communimage.ch).

place, i.e. the "box" in communimage, causes exposing to the impact of the communimage without the possibility of limitations. It is a peculiar experience of the "openness", perhaps as the value of this work, where the recipient loses the sense of foundation for one's own decision – the last restriction of the recipient is the choice to enter into the communimage community or remain an observer, the decision of co-creation is a creative act. The recipient shall not make contact with the work on the basis of the pro-scenic reception, but either he gives something of himself and takes part in the experiment in a personal way, or he really deals with communimage. The process of reception is associated with a commitment, the identification with the work as a contributor. The experience of co-creation sets the recipient in a different situation in relation to the pro-scenic art – owing to real and personal involvement a sense of one's place on the web is born. The participation in communimage implies the existence of self-expression, man experiences art not so much on the basis of non-obliging pro-scenity, but he participates in an open environment, where unexpected contexts may emerge. Probably due to the interactivity the recipient can also identify, at least in part, with the artist and the creative process. This is the aspect of interactivity, which provides the designer-recipient relationship to a new ground, the other one than in traditional art, within the common experience, thus overcoming the distinction between so-called audience and the stage.

We tend to believe that a man involved in the interactivity, is subjected to the type of "reprogramming". Interactive human co-existence with the digital environment (the media) conditions a human being[4]. Our cognition varies depending on the contents which we receive, and in turn which affects the identity processes. We do not have in mind the phenomenon similar to e.g. advertising or media impacts prepared by

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[4] „We have named the new reflexes the conditioned ones, opposing them to the innate reflexes – *non-conditioned reflexes*. This adjective is used more and more commonly. This name is from the point of view of a researcher entirely justified. In comparison with the innate ones they are really very conditioned reflexes: firstly, they require defined conditions in order to appear, secondly, they depend on many factors in their functions." (I. P. Pawłow, *Wykłady o czynności mózgu*, Towarzystwo Wydawnicze „Rój", Warszawa 1938, p. 29) and „So, why not to consider the forming of the conditioned reflex as a purely physiological phenomenon? We affected the nervous system of the dog by a serious of outer factors, and as a result a new nervous connection on the basis of defined rules followed. As a result we have to deal with the conditioned reflex." (I. P. Pawłów, *Wykłady o czynności mózgu*, Towarzystwo Wydawnicze „Rój", Warszawa 1938, p. 35). Making a generalization we could say that a defined outer factor has caused a special reaction from a live organism. At the same time we have in a typical form what could be defined by words: adaptation, purposefulness. […] What is the phenomenon of adaptation? As we saw it only involves a precise and mutual relation of elements of a complex set and dependencies between their entire systems from the environment." (I. P. Pawłow, *Psychologia i psychopatologia doświadczalna zwierząt*, [in:] I. P. Pawłow, Ch. Sherrington, E. Adrian, *Mózg i jego mechanizm*, Biblioteka „Mathesis Polskiej" Czytelnik, Wrocław 1945, p. 68).

social engineering methods, for example, television, but the overall impact of the electronic media which change the man[5]. The interactive man is a man who stares at a display, it is a responsive entity, adjusting his mental processes to the stimuli coming from electronic media, changing meaning of the "reality". The man is involved in the electronic *realis* in the process of interactivity, and not in the physical world, and that is the reason why he changes his thinking about the reality. By "reprogramming" we understand adapting thinking to the *realis* electronic environment where this thinking is gaining a new dimension of mediation. We are talking about cyber-cultural conditioning, which changes the way of human functioning in the world.

By "reprogramming" of man we understand the change of the way of communication with the environment, i.e. with the electronic reality. The phenomena within cyber-culture arising from technological developments, make adjustments of the mind to the *device* – and by moving them in and by shaping them in electronic space – they aim at relieving the processes in the physical world. The man used the *device*, because human activity becomes the mediated interactivity, which then changes the man. He does not elect them because he prefers to use it, but because without the *device* he is excluded from the realm of interactive influence, which to a large extent defines the dimension of everyday life. The man is deprived of a part of electronic reality, having more and more importance for the existence and often being a sphere for the values, which cannot be realized in the physical reality of the world, if he has no *"device"*.

The saturation of the information potential and connections, resulting from mediation, may cause a sense of redundancy, causing subsequent cloning of *devices*, created in order to disperse the information pressing, and opening up to even greater impact will result in aggregation of incoming content, by which the alleviation originally assumed turns into

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[5] We refer to the Sapir-Whorf theory, where they enlist two factors by which the emergence of human behaviour, i.e. the influence of the personality and the culture, are characterised: „It is probable that both kinds of interests are necessary as the protection of individual psyche in the environment which the experience makes more and more complex and impossible to acquire in a direct manner. The interests related with the concepts of "culture" and „personality" are a necessary component of the development of the individual; the basis for each of them is a different type of participation of the observer in the life surrounding him." (E. Sapir, *Kultura, język, osobowość* (trans. by B. Stanosz, R. Zimand), PIW, Warszawa 1978, p. 137).

burden. A good example of this may be electronic mail operation, which serving relief to man may change in consequence into subsequent burden.

The introduction of information and processes to the Web produces natural density communication thrusts, which in turn can lead to narrowing the processes in the physicality, or even their mutual elimination. Interactivity in the reality of electronic *realis* is all the more in proportion to the activity in the physical reality of the world, which being excessive and more efficient in terms of use, and it may dominate human activity in the physical world. The selection and classification of information on the Web are so difficult that there are still new forms, that most often increase the intensity of the impact on the human. The *devices* themselves are starting to communicate with each other, to organize the human world in which he himself – in order to be – creates his own identity, adapting to the conditions dictated by the technology.

We are trying to say that the electronic interactivity directs us to open up and assimilate influences. The closing up is a technological and mental isolation, the loss of capacity for existence in the time of the technology. An open attitude, even not so much to the impact, but allowing the possibility of existence of influences, is the beginning of "reprogramming" for existence in the reality of electronic *realis*. The more influences result from the interactivity, the more a person is subjected to shaping. In the era of interactive media the identity is subjected to mediation, and not consolidating the fixed foundation. This is just the continuation of the multitude of personalities and the diversity of experience.

The pro-scenic media, acting in terms of information formatting, change the original human thinking about the world – most often it has social engineering importance, and it involves the formation of an external influence on making judgments about the physical world. We ascribe the main role in this sphere to interactive media, i.e. to the Web, where a comprehensive direction to the human environment as a kind of electronic reality appears through interactivity. The interactivity produces a spectrum of influences, and if man enters them, in principle, he does not leave himself the opportunity to stop these processes – the Heraclitus's river of interactivity enraptures and inclines to flow. The

electronic *realis* is a sphere, with which man increasingly integrates more on the principles of other processes than the ones which belong to the physical reality of the world. We are inclined to pose the hypothesis that perhaps the interactive environment of the man, arising through the evolution, is just the human world – *the electronic anthropo-sphere*.